

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:  
PAUL A. PYSHER  
FISH & RICHARDSON, P.C.  
225 FRANKLIN STREET  
BOSTON, MA 02110

## PCT

WRITTEN OPINION

(PCT Rule 66)

Applicant's or agent's file reference  11333-013WO1		Date of Mailing (day/month/year) <b>31 MAY 2007,</b>  REPLY DUE within 1 months/days from the above date of mailing
International application No. PCT/US01/45198	International filing date (day/month/year) 16 November 2001 (16.11.2001)	Priority date (day/month/year) 20 November 2000 (20.11.2000)
International Patent Classification (IPC) or both national classification and IPC IPC: <b>G06F 11/00</b> ( 2007.01), <b>15/16</b> ( 2007.01); <b>H04M 11/00</b> ( 2007.01) USPC: 379/102.03; 709/250; 714/25		
Applicant EMAION, INC.		

1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority.
2. This opinion contains indications relating to the following items:
  - I ☒ Basis of the opinion
  - II ☐ Priority
  - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV ☐ Lack of unity of invention
  - V ☒ Reasoned statement under Rule 66.2 (a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI ☐ Certain documents cited
  - VII ☐ Certain defects in the international application
  - VIII ☐ Certain observations on the international application
3. The applicant is hereby **invited to reply** to this opinion.
 

**When?** See the time limit indicated above. ~~The applicant may, before the expiration of that time limit, request this Authority to grant an extension. See rule 66.2(d).~~

**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also** For an additional opportunity to submit amendments, see Rule 66.4.  
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 *bis*.  
For an informal communication with the examiner, see Rule 66.6

**If no reply is filed**, the international preliminary examination report will be established on the basis of this opinion.
4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 20 March 2003 (20.03.2003).

Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/ US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Authorized officer  David A Wiley  Telephone No. (571)272-2100
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**WRITTEN OPINION**

International application No.

PCT/US01/45198

**I. Basis of the opinion**

1. With regard to the **elements** of the international application:\*

- ☒ the international application as originally filed
- ☒ the description:  
 pages 1-12, as originally filed  
 pages NONE, filed with the demand  
 pages NONE, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
 pages 13-22, as originally filed  
 pages NONE, as amended (together with any statement) under Article 19  
 pages NONE, filed with the demand  
 pages NONE, filed with the letter of \_\_\_\_\_
- ☒ the drawings:  
 pages 1-4, as originally filed  
 pages NONE, filed with the demand  
 pages NONE, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
 pages NONE, as originally filed  
 pages NONE, filed with the demand  
 pages NONE, filed with the letter of \_\_\_\_\_

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages NONE
- ☐ the claims, Nos. NONE
- ☐ the drawings, sheets/~~fig~~ NONE

5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed."

**WRITTEN OPINION**

International application No.  
PCT/US01/45198

**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. STATEMENT**

Novelty (N)	Claims <u>2, 4, 6, 11-29, 31, 33, 35, 38-46</u>	YES
	Claims <u>1, 3, 5, 7-10, 30, 32, 34, 36-37, 47-48</u>	NO
Inventive Step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-48</u>	NO
Industrial Applicability (IA)	Claims <u>1-48</u>	YES
	Claims <u>NONE</u>	NO

**2. CITATIONS AND EXPLANATIONS**

Please See Continuation Sheet

## Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

**TIME LIMIT:**

The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.

**V. 2. Citations and Explanations:**

Claims 1, 3, 5, 7-10, 30, 32, 34, 36, 37, 47, 48 lack novelty under PCT Article 33(2) as being anticipated by U.S. Patent Number 6,560,656 to O'SULLIVAN.

Regarding claims 1, 30, 47, and 48, O'Sullivan discloses a computer program implementing an automated device recordation and registration process for automatically registering, on a remote computer, an embedded device comprising:  
a feature detection process for detecting feature information associated with a device to be registered (O'Sullivan, col. 6, lines 47-48);  
a feature transmission process for transmitting said feature information to a remote computer at a known address using a self describing computer language (col. 6, lines 10-25); and  
a registration process for registering said device by storing said feature information on said remote Computer (O'Sullivan, col. 6, line 5, lines 50-55).

Regarding claims 3 and 32, O'Sullivan discloses all of the features of the invention substantially as claimed, as described in claim 1, including wherein said known address is a Uniform Resource Locator (O'Sullivan, col. 7, lines 33-38).

Regarding claim 5 and 34, O'Sullivan discloses all of the features of the invention substantially as claimed, as described in claim 1, including wherein said feature information comprises a device type and a device instance (O'Sullivan, col. 6, lines 40-45).

Regarding claims 7 and 36, O'Sullivan discloses all of the features of the invention substantially as claimed, as described in claim 1, including wherein said remote computer includes a database for storing said feature information (O'Sullivan, col. 6, lines 35-45).

Regarding claims 8 and 37, O'Sullivan discloses all of the features of the invention substantially as claimed, as described in claim 7, including a device registration status process for examining said database to determine if said device was previously registered on said remote computer and initiating said registration process if said device is not registered (O'Sullivan, col. 6, lines 47-55).

Regarding claim 9, O'Sullivan discloses all of the features of the invention substantially as claimed, as described in claim 8, including wherein said remote computer resides on a distributed computing network and said feature transmission process transmits said feature information to said remote computer via said distributed computing network (O'Sullivan, col. 5, lines 55-67).

## Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Regarding claim 10, O'Sullivan discloses all of the features of the invention substantially as claimed, as described in claim 9, including wherein said distributed computing network is the Internet (O'Sullivan, col. 5, line 62).

Claims 2, 4, 11-17, 27-29, 31, 33, and 38-41 lack an inventive step under PCT Article 33(3) as being obvious over U.S. Patent Number 6,560,656 to O'SULLIVAN.

Regarding claims 2 and 31, O'Sullivan teaches the limitations of claim 1. O'SULLIVAN does not teach using extensible Markup Language (XML) in a computer networking environment. However it was well known to those skilled at the time of the invention.

Regarding claims 4 and 33, O'Sullivan teaches the limitations of claim 1. O'SULLIVAN does not teach using Transmission Control Protocol/Internet Protocol (TCP/IP) addresses. However it was well known to those skilled at the time of the invention.

Regarding claims 11-13, O'Sullivan teaches the limitations of claim 9. O'SULLIVAN does not teach using direct, dial-up, and wireless network connections to connect to a network. However it was well known to those skilled at the time of the invention.

Regarding claims 14 and 38, O'Sullivan, in combination with what is well known in the art, teaches the limitations of claim 9, including wherein said device includes embedded software which controls said device's functionality (O'Sullivan, col. 7, lines 25-30). O'SULLIVAN does not teach wherein said embedded software has a specific version identifier associated with it. However it was well known to those skilled at the time of the invention.

Regarding claim 15-17 and 39-41, O'Sullivan, in combination with what is well known in the art, teaches the limitations of claim 14. O'SULLIVAN does not teach wherein said database stores a software update, having a specific version identifier, and wherein software update is the newest version available, comparing said version identifier to the version identifier of embedded software to determine if an update is needed, and updating embedded software residing on device. However it was well known to those skilled at the time of the invention.

Regarding claims 27-29 O'Sullivan teaches the limitations of claim 1. O'SULLIVAN does not teach wherein the devices are registered in the remote computer's database through the SMTP remote mail server. However it was well known to those skilled at the time of the invention.

Claims 6 and 35 lack an inventive step under PCT Article 33(3) as being obvious over U.S. Patent Number 6,560,656 to O'SULLIVAN in view of U.S. Patent Number 5,586,254 to KONDO.

Regarding claims 6 and 35, O'Sullivan discloses the features of the invention as described in claims 5 and 34. O'Sullivan also teaches that a lookup service, located in the remote computer's memory, contains an object/instance for each service supplied by each device. However, O'Sullivan does not specifically state wherein said device type is a model number and said device instance is a serial number.

In an analogous art of networking, Kondo teaches a system for managing and operating network devices wherein the attributes of the devices to be managed include model number and serial number (Kondo, col. 10, lines 20-33).

Therefore, it would have been obvious to provide detailed information about the managed network devices for the benefit of reducing the work of the network manager (KONDO, col. 6, lines 9-10).

Claims 6 and 35 lack an inventive step under PCT Article 33(3) as being obvious over U.S. Patent Number 6,560,656 to O'SULLIVAN in view of U.S. Patent Number 6,415,023 to IGGULDEN.

Regarding claims 18 and 42, O'Sullivan discloses the features of the invention as described in claims 7 and 30. O'Sullivan also teaches a lookup service containing an object for each service from each device. However, O'Sullivan does not disclose the objects containing feature information including system information concerning the location, ownership, and configuration of said device.

In an analogous art to networking, IGGULDEN discloses a method for setting features of a device where the features include system information including location, ownership, and configuration of said device (col. 4, lines 40-55).

Therefore it would have been obvious to enable the system to collect information concerning consumer's use of product features which can be useful in product marketing and new product design (IGGULDEN, col. 4, lines 40-45).

Regarding claims 19 and 43, O'Sullivan and IGGULDEN teach the limitations of claims 18 and 42, including a system information interface for allowing the owner of said device to configure said system information (IGGULDEN, col. 4, lines 40-55).

## Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Regarding claim 20, O'Sullivan and IGGULDEN teach the limitations of claims 19, including wherein said device includes a HyperText Transfer Protocol (HTTP) device web Server and said system information interface is a software application residing on said device web server, where the owner of said device can edit said system of said device by accessing said system information interface via a remote web client (IGGULDEN, col. 3, line 62 through col. 4, line 5).

Regarding claim 24, O'Sullivan teaches the limitations of claim 7. However, O'Sullivan does not disclose wherein said device includes a device web client and said remote computer includes a HyperText Transfer Protocol (HTTP) remote web server.

In an analogous art, IGGULDEN teaches a web server connected to devices through the web (IGGULDEN col. 3, lines 60 through col. 4, line 5).

Regarding claim 25, O'Sullivan and IGGULDEN teach the limitations of claim 24, including wherein said remote computer includes an application logic to interface said remote web server and said database (O'Sullivan col. 6, lines 40-55).

Regarding claim 26, O'Sullivan and IGGULDEN teach the limitations of claim 25, including wherein said feature transmission process utilizes said device web client to upload said feature information from said device to said remote web server, where said application logic transfers said feature information from said remote web server to said database (O'Sullivan, col. 6, lines 45-55).

Regarding claims 21-23 and 44-46, O'Sullivan and IGGULDEN teach the limitations of claims 19 and 43. However, O'Sullivan does not disclose transmitting system information to a database on the remote computer after comparing the system information to see if it needs to be updated, and uploading system information to the server. However it was well known to those skilled at the time of the invention.

## ----- NEW CITATIONS -----

US 5,586,254 A (KONDO et al) 17 December 1996, see column 10, lines 20-33

US 6,415,023 B2 (IGGULDEN) 2 July 2002, see column 3, line 62 through column 4, line 5 column 4, lines 40-55

US 6,560,656 B1 (O'SULLIVAN et al) 6 May 2003, see column 5, lines 55-67; column 6; column 7, lines 25-38;

(12) **United States Patent**  
**O'Sullivan et al.**

(10) **Patent No.:** **US 6,560,656 B1**  
 (45) **Date of Patent:** **May 6, 2003**

(54) **APPARATUS AND METHOD FOR PROVIDING DOWNLOADABLE CODE FOR USE IN COMMUNICATING WITH A DEVICE IN A DISTRIBUTED SYSTEM**

(75) **Inventors:** **Bryan O'Sullivan, San Francisco, CA (US); Robert Scheffler, Somerville, MA (US); Peter C. Jones, Winchester, MA (US); Ann M. Wollrath, Groton, MA (US); Kenneth C. R. C. Arnold, Lexington, MA (US); James H. Waldo, Dracut, MA (US)**

(73) **Assignee:** **Sun Microsystems, Inc., Santa Clara, CA (US)**

(\*) **Notice:** **Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.**

(21) **Appl. No.:** **09/044,939**

(22) **Filed:** **Mar. 28, 1998**

**Related U.S. Application Data**

(60) **Provisional application No. 60/076,048, filed on Feb. 26, 1998.**

(51) **Int. Cl.<sup>7</sup>** ..... **G06F 15/16; G06F 15/17**

(52) **U.S. Cl.** ..... **709/250; 709/220**

(58) **Field of Search** ..... **709/225, 223, 709/229, 315, 317, 204, 205, 206, 220, 250; 713/200, 201, 202; 707/110**

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Aldrich et al., "Providing Easier Access to Remote Objects in Client-Server Systems," System Sciences, 1998, Proceedings of the 31st Hawaii Internat'l. Conference, Jan. 6-9, 1998, pp. 366-375.

Burns et al., "An Analytical Study of Opportunistic Lease Renewal," Distributed Computing Systems, 21st International Conference, pp. 146-153, Apr. 2000.

(List continued on next page.)

*Primary Examiner*—Zarni Maung

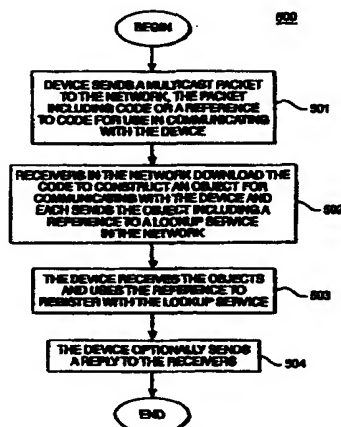
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(74) *Attorney, Agent, or Firm*—Finnegan Henderson Farabow Garrett & Dunner LLP

(57) **ABSTRACT**

Downloading code for communicating with a device that joins a network. When the device joins the network, it transmits a multicast packet including a reference to code for use in communicating with the device. Receivers in the network use the reference to download the code for constructing objects to communicate with the device, and the receivers respond with a reference to a lookup service in the network. Using the reference from the receivers, the device registers with the lookup service.

**12 Claims, 5 Drawing Sheets**



(12) **United States Patent**  
**Iggulden**

(10) **Patent No.:** US 6,415,023 B2  
 (45) **Date of Patent:** \*Jul. 2, 2002

(54) **METHOD AND APPARATUS FOR SETTING  
 PROGRAMMABLE FEATURES OF AN  
 APPLIANCE**

(75) **Inventor:** Jerry Iggulden, Santa Clarita, CA (US)

(73) **Assignee:** PointSet Corporation, Los Angeles,  
 CA (US)

(\*) **Notice:** This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) **Appl. No.:** 09/235,709

(22) **Filed:** Jan. 22, 1999

(51) **Int. Cl.<sup>7</sup>** ..... H04M 11/00

(52) **U.S. Cl.** ..... 379/102.03; 379/102.01;  
 379/102.03; 379/93.17

(58) **Field of Search** ..... 379/102.01, 102.02,  
 379/102.03, 102.05, 102.07; 345/166, 175,  
 329, 970; 709/220, 221, 222, 217, 218

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WO98/38570; Methods and apparatus for programming a device with a software package, Sep. 3, 1998.\*

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Microsoft Corporation, *Setting Up Your Microsoft Cordless Phone is Easy*, website printout, Dec. 15, 1998.

Shear, D., *Going Global in the Real World: Putting an Embedded System on the Internet*, EDN Electrical Design News, US, Cahners Publishing Co., Newton, Massachusetts, vol. 42, No. 19, Sep. 12, 1997, pp. 37-46.

*Primary Examiner*—Stella Woo

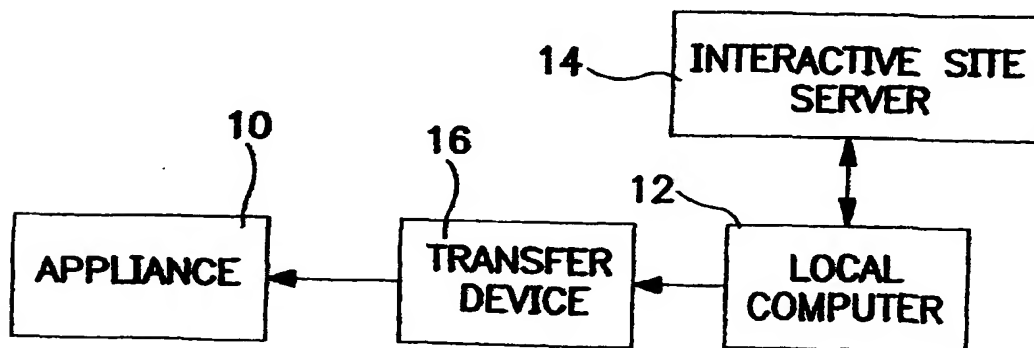
*Assistant Examiner*—Melur Ramakrishnaiah

(74) *Attorney, Agent, or Firm*—Blakely, Sokoloff, Taylor & Zafman LLP

(57) **ABSTRACT**

An interactive interface facilitates the setting of preferences and other programmable parameters of an appliance. The interface is hosted by a server on a global computer network. The appliance owner initiates a connection to the server and is presented with a graphical user interface for setting the preferences and features of the appliance. Once the desired settings have been made, they are downloaded to the appliance either directly from the server or the appliance owner's computer or indirectly using a portable transfer device.

7 Claims, 2 Drawing Sheets





**United States Patent** [19]

Kondo et al.

[11] Patent Number: **5,586,254**[45] Date of Patent: **Dec. 17, 1996**

[54] **SYSTEM FOR MANAGING AND OPERATING A NETWORK BY PHYSICALLY IMAGING THE NETWORK**

[75] Inventors: **Mariko Kondo; Teruo Nakamura; Yumiko Mori; Toshiyuki Tsutsumi**, all of Yokohama, Japan

[73] Assignee: **Hitachi Software Engineering Co., Ltd.**, Kanagawa-ken, Japan

[21] Appl. No.: 18,430

[22] Filed: **Feb. 16, 1993**

[30] Foreign Application Priority Data

Feb. 13, 1992 [JP] Japan \_\_\_\_\_ 4-026405  
Sep. 18, 1992 [JP] Japan \_\_\_\_\_ 4-249890

[51] Int. Cl.<sup>6</sup> \_\_\_\_\_ **G06F 15/40; G06F 15/66; G06F 13/94**

[52] U.S. Cl. \_\_\_\_\_ **395/200.1; 395/615; 340/825.03; 364/228; 364/229.4; 364/927.99**

[58] Field of Search \_\_\_\_\_ **395/51, 200, 600, 395/200.1; 340/825.03**

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3-101539 4/1991 Japan .  
3-973300 4/1991 Japan .  
3-195230 8/1991 Japan .

*Primary Examiner*—Thomas C. Lee

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*Attorney, Agent, or Firm*—Fay, Sharpe, Beall, Fagan, Minnich & McKee

[57] **ABSTRACT**

A system for operating and managing the network equipment is so adapted as to operate and manage a network in which plural computers and network devices are connected to each other. The system is provided with database storing data corresponding to the computers and the network devices and with means for preparing a network specification drawing which satisfies conditions required by the user from the data, for checking the physical data as to whether the network specification satisfies the physical data, for checking the logical data as to whether the network specification satisfies the logical data, and for displaying the network specification drawing in a two-dimensional or three-dimensional manner on the basis of the data stored in the database. The system for operating and managing the network equipment can reduce and simplify management business for network managers as well as management business for managing materials and products by managers managing the materials and products. Further, the system can take necessary measures in case of a fault or a failure of the network and save a resource by sharing the computer resources and the data in an appropriate way.

**17 Claims, 93 Drawing Sheets**

